

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/028423 A1

(51) International Patent Classification⁷: A61F 13/00

(21) International Application Number:
PCT/GB2003/004118

(22) International Filing Date:
25 September 2003 (25.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0222527.4 27 September 2002 (27.09.2002) GB
60/486,445 14 July 2003 (14.07.2003) GB

(71) Applicant (for all designated States except US): JOHN-
SON & JOHNSON MEDICAL LIMITED [GB/GB]; Er-
skine House, 68-73 Queen Street, Edinburgh EH2 4NH
(GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ADDISON, Deb-
orah [GB/GB]; 2 Dovenanter Cottage, Keasden, Near

Clapham, Via Lancaster LA2 8HB (GB); ESSLER, Ali-
cia, Joanna [GB/GB]; 17B Walton Street, Skipton, North
Yorkshire BD23 2QX (GB); CULLEN, Breda, Mary
[GB/GB]; 7 Consort Street, Skipton, North Yorkshire
BD23 1HR (GB); SILCOCK, Derek, Walter [GB/GB]; 2
Ash Grove, Skipton, North Yorkshire BD24 1QP (GB).

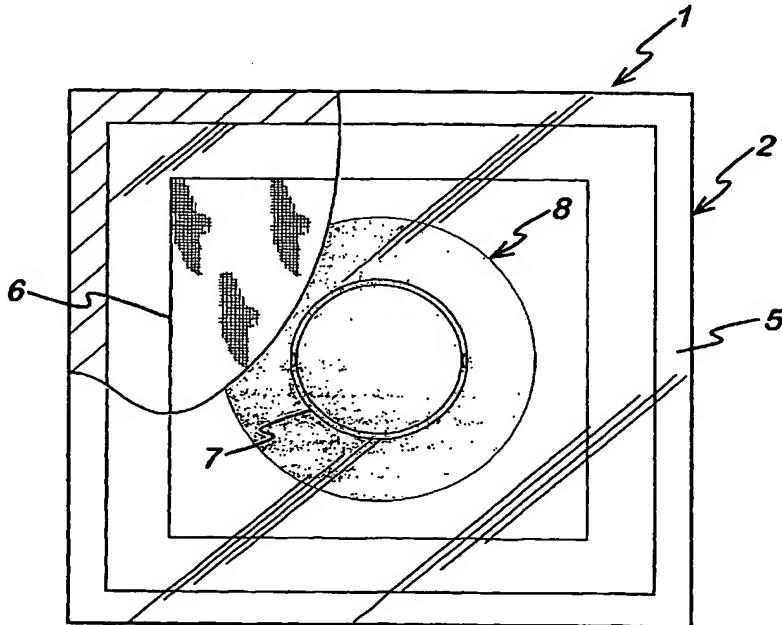
(74) Agents: JAMES, Anthony, Christopher, W., P. et al.;
Carpmaels & Ransford, 43-45 Bloomsbury Square, Lon-
don WC1A 2RA (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: WOUND TREATMENT DEVICE



(57) Abstract: A wound treatment device comprising a water-impermeable envelope having at least one aperture, wherein the envelope contains a therapeutic substance, and wherein the at least one aperture in the envelope is blocked by a material that breaks down in the presence of one or more active components of wound fluid thereby permitting the therapeutic substance to contact the wound fluid. Preferably, the aperture is blocked by a material that is a substrate for an enzyme present in wound fluid, such as a protease.

2004/028423 A1



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04118

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F13/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 369 997 A (JOHNSON & JOHNSON MEDICAL LTD) 19 June 2002 (2002-06-19) page 13, line 1 - line 2 page 3, line 30 -page 4, line 6 page 4, line 21 - line 29 page 10, line 28 -page 11, line 6 page 13, line 4 - line 6 page 13, line 20 - line 32	1,2,5, 7-9,11, 14,15
Y	US 4 499 896 A (HEINECKE STEVEN B) 19 February 1985 (1985-02-19) column 4, line 43 - line 45; claims 1-5; example 10	3,4,6, 10,12,13
Y	----- -----	3,4
	----- -----	-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

T later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the International search report
8 December 2003	18/12/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 851 epo nl, Fax: (+31-70) 340-3016	Authorized officer Douskas, K

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/04118

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 160 200 A (EHRNSPERGER BRUNO J ET AL) 12 December 2000 (2000-12-12) column 2, line 13 - line 31 column 3, line 27 - line 33 column 11, line 38 - column 12, line 15 column 13, line 49 - line 59; claims 1-20 ---	6
Y	US 5 549 908 A (SMITH DANIEL J ET AL) 27 August 1996 (1996-08-27) column 11, line 62 - line 67; claims 1,22-26 ---	10,12,13
P,X	GB 2 379 392 A (JOHNSON & JOHNSON MEDICAL LTD) 12 March 2003 (2003-03-12) the whole document ---	1-5,9, 11,14,15
P,X	WO 03 026544 A (CULLEN BREDA MARY ;JOHNSON & JOHNSON MEDICAL LTD (GB); KIRKWOOD AN) 3 April 2003 (2003-04-03) the whole document ---	1-15
A	WO 02 38097 A (JOHNSON & JOHNSON MEDICAL LTD ;ADDISON DEBORAH (GB); SILCOCK DEREK) 16 May 2002 (2002-05-16) the whole document ---	1-5, 8-10,14, 15
A	US 4 541 426 A (WEBSTER DAVID F) 17 September 1985 (1985-09-17) claims; figures ---	1
A	EP 0 875 222 A (JOHNSON & JOHNSON MEDICAL) 4 November 1998 (1998-11-04) claims; figures ---	1
A	US 6 143 037 A (BONADIO JEFFREY F ET AL) 7 November 2000 (2000-11-07) column 3, line 1 - line 16; claims ---	10-13
A	US 5 540 922 A (FABO TOMAS) 30 July 1996 (1996-07-30) claims ---	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/04118

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
GB 2369997	A	19-06-2002	AU EP WO	2216102 A 1341561 A1 0247737 A1	24-06-2002 10-09-2003 20-06-2002
US 4499896	A	19-02-1985	AU AU BR CA DE EP ES ES ES JP JP JP MX NZ ZA	553597 B2 1292783 A 8301619 A 1193966 A1 3365233 D1 0090564 A2 279098 U 280978 U 284681 U 1625184 C 2052505 B 58180152 A 157855 A 203745 A 8302238 A	24-07-1986 06-10-1983 06-12-1983 24-09-1985 18-09-1986 05-10-1983 01-01-1985 16-10-1985 01-11-1985 18-11-1991 13-11-1990 21-10-1983 16-12-1988 20-02-1987 28-12-1983
US 6160200	A	12-12-2000	AU BR CA CN EP JP TW WO US ZA	4850399 A 9911323 A 2333874 A1 1126526 B 1094775 A2 2002519101 T 406014 B 0000119 A2 6410821 B1 200006956 A	17-01-2000 20-03-2001 06-01-2000 05-11-2003 02-05-2001 02-07-2002 21-09-2000 06-01-2000 25-06-2002 14-08-2001
US 5549908	A	27-08-1996	WO	9427647 A1	08-12-1994
GB 2379392	A	12-03-2003	NONE		
WO 03026544	A	03-04-2003	GB WO	2380135 A 03026544 A1	02-04-2003 03-04-2003
WO 0238097	A	16-05-2002	AU EP WO	1255202 A 1333788 A1 0238097 A1	21-05-2002 13-08-2003 16-05-2002
US 4541426	A	17-09-1985	AT AU AU CA DE EP JP JP JP ZA	27904 T 564402 B2 2644984 A 1214085 A1 3464326 D1 0122085 A1 1036380 B 1555629 C 59205959 A 8402504 A	15-07-1987 13-08-1987 11-10-1984 18-11-1986 30-07-1987 17-10-1984 31-07-1989 23-04-1990 21-11-1984 30-01-1985
EP 0875222	A	04-11-1998	GB US AT AU AU	2324732 A ,B 5981822 A 221360 T 748103 B2 6375598 A	04-11-1998 09-11-1999 15-08-2002 30-05-2002 05-11-1998

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB 03/04118

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
EP 0875222	A		CA 2236436 A1 DE 69806842 D1 DE 69806842 T2 EP 0875222 A1 JP 11056900 A	02-11-1998 05-09-2002 09-01-2003 04-11-1998 02-03-1999
US 6143037	A	07-11-2000	AU 715339 B2 AU 3386697 A CA 2257976 A1 EP 0910301 A1 JP 2000512519 T WO 9747254 A1	20-01-2000 07-01-1998 18-12-1997 28-04-1999 26-09-2000 18-12-1997
US 5540922	A	30-07-1996	SE 500973 C2 CA 2132983 A1 DE 69305735 D1 DE 69305735 T2 EP 0633758 A1 ES 2093420 T3 JP 7505310 T SE 9200984 A WO 9319710 A1	10-10-1994 14-10-1993 05-12-1996 06-03-1997 18-01-1995 16-12-1996 15-06-1995 01-10-1993 14-10-1993